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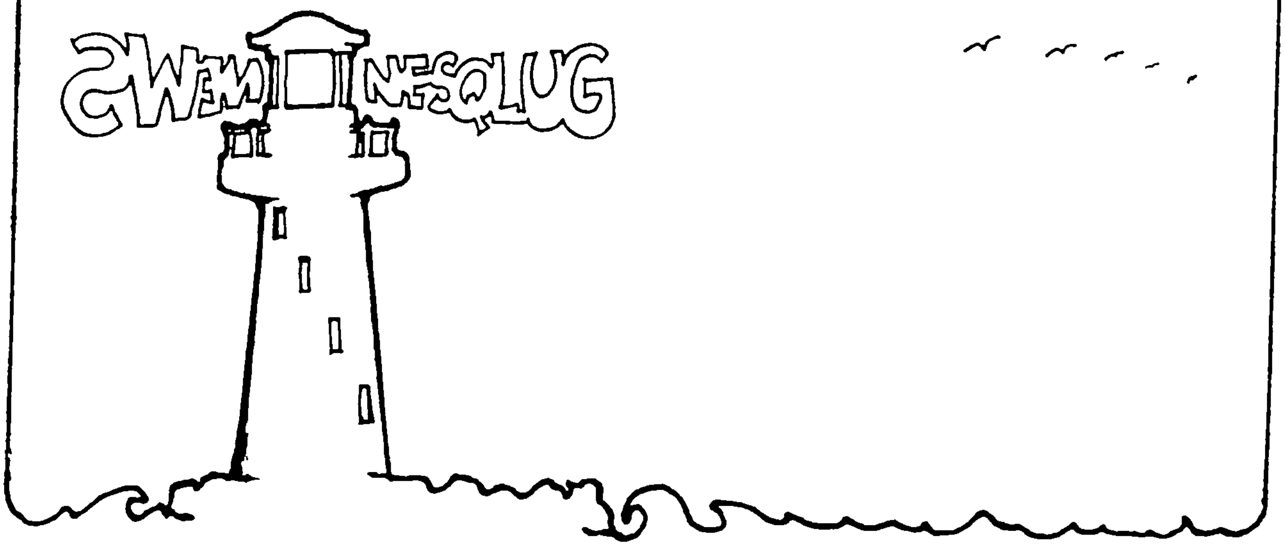
FIRST CLASS MAIL



THE NEWSLETTER OF THE NEW ENGLAND SINCLAIR QL USER GROUP

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RAM_blings

Ed Kingsley

God summons Bill Clinton, Boris Yeltsin and Bill Gates to heaven. He informs them that he has decided to end the earth in 30 days. He asks each of them to return home and help prepare the people of the world for their destiny.

Boris Yeltsin appears on Russian TV and says, "I have Bad News and Worse News. The Bad News is that we have been completely wrong for all these years, there IS a God. The Worse News, is that He has decided to end the world in 30 days".

Bill Clinton takes to the airways and announces he has Good News and Bad News. "The Good News, is that all our dearly cherished beliefs are true, there IS a God. The Bad News, is that He is ending the world in 30 days".

Bill Gates addresses his employees at Microsoft and says, "I have Good News and Great News. The Good News, is that the Almighty thinks of me as a world leader. The Great News, is that we won't have to ship WINDOWS 95!".

I'm not sure whether this constitutes Good News, Bad News or even News, but this Issue marks the end of my first year as editor of the NESQLUG NEWS. Technically, a little longer, but hey, why quibble, a year's long enough.

The other day, I saw one of those little stick-on clocks, the round ones about 1 1/4" in diameter, and did a double take. It was **analog**! Twelve little numbers and two real hands. It was also $12.50 or I would have owned it on the spot.

I bought a digital watch 17 years ago because, at the time, digital was more accurate, more reliable and much more versatile than analog (cheaper, too). My house is lousy with analog wall clocks (along with a couple of those round stick-on digital things), but I never **really** realized until I saw that small analog just how much I missed numbers and hands on a clock. If my "Seiko" ever wears out (and it may not..), I'm definitely back.

The band I play in is going into the studio this month to do some recording and the first problem we face is whether to record on digital or analog equipment. The former is cheaper, easier to work with and capable of many high tech "tricks". The latter is considerably more expensive, more difficult and slower to work with and is subject to generation degredation when copied. So why chose analog? Some critics allege it's got a 'warmth' that digital recording lacks, that makes it sound 'better'.

I remember people arguing that vacuum tube audio amplifiers had that same 'warmer' characteristic which was, at that time, seen as also lacking in the transistorized (digital) versions. The transistors were cheaper though, and much more reliable, and we certainly know who 'won' that debate.

Take high definition (digital) television - *(please)*. Give me the look of movie film (analog) any time. Less sharp, perhaps, less clear even, but lots more 'character'. Perhaps it makes us less aware of the medium and more aware of the message. Maybe that's the real appeal of analog.

So, does this tell me something about myself? Do I have analog ears, eyes, metabolism or sensibility? Do I like a little vaseline smeared on the lens of my outlook to ease the rough edges, as we all rush merrily pell-mell through a time and space we barely understand and which, frankly speaking, scares the crap out of me most of the time. Yes, actually, I do. I think maybe analog in this increasingly digital environment is somehow, well, somehow more human.

That soft, whistling sound you sometimes hear, dear reader, is probably just your life whizzing past your ears.

Okay, enough of that. Once a year - I earned it, now back to the digital world - data at 11:00. At least I've spared you all that "how much I've learned and grown by being Editor - stuff", so you owe me.

In this issue, we have another 'drag you kicking and screaming' article in "GOING ONLINE 5 - Getting To Know QBOX-USA", by our own Road Scholar of the information highway, Mr. Bill Cable. I think Bill conceives this series as sort of a NESQLUG 12 step program. I hope so, since then there are still 7 more articles to go.

Our cyber-dilettante Mike Jonas, concludes his how to 'hot rod' your (his) computer (article) in "Me and My Mac - Part 2", and teases us with a trailer on his next subject, "Me and My Mac - Part 3".

Mike has located an on-line, QL News magazine, originating in Great Britain, entitled "Club QL". Watch for more details, next issue.

He who must be obeyed, our Director, Al Boehm, contributes his concluding article on Fonts - complete with some great demo software, shares his QL family roots, and gives us some insight (with illustrations) into converting the GIF graphic format for use on the QL (and vise versa). Finally folks, real pictures in the Newsletter, in the brand new NESQLUG SPP (Scratch and Peek Protocol). Can 'Classifieds' be far behind?

(WM QL'r with floppy disks seeks WF Ql'r with ... include photo in GIF format please ...)

Our Treasurer and Membership Secretary, Gary Norton, who is even now probably checking his mailbox for your renewals, looks for answers to a couple of problems which vex him. Payback time out there. Gary's been there for us, let's give him a hand.

And, let's not forget the power of guilt, the gift that keeps on giving. Floridian March Renick couldn't take it anymore, and so he writes and gives us a glimpse into his own personal relationship with the QL. Thanks March.

Finally, the matter of the questionnaire. I thought it was time to find out a few things about our members. Several years ago I put together a similar query which had a better than a 70% response! This is very high for this sort of thing, and I think it said a lot about the kind of people we are. For instance, I'm sort of nosey.

To make it as easy as possible, I'm including a self addressed **AND STAMPED** envelope. Please feel free to include your membership renewal at the same time and save yourself $.33 in the process. Think of it as a discount. A small token of our appreciation - thank you for your support.

Unfortunately, if you're not renewing, you can't keep the stamp, it just wouldn't be right. Please mail it back promptly.

To all of you out there who were desperately trying to send me an article for this Issue, I'm afraid I gave you the wrong Email address. I'm sorry, it should have been **STILLMAN@HBS.HARVARD.EDU**. Please, try sending them again. Thank you.

A reminder about the 3rd Annual North American (international) QL Show upcoming up in Oak Ridge, TN, on June the 10th. Contact Bob Dyl at PO Box 3991, Newport, RI, 02840-0987 or telephone (401) 849-3805, for details or information. It's also an excellent opportunity to get all of your old analog, glow-in-the-dark watch dials recharged for almost nothing.

HELP ME! - WITH CONQUEROR SE

Gary Norton

With the purchase by many of us of the Digital Precision, QL COLLECTION, I'm hoping someone will be able to come to my rescue concerning a couple of problems I'm having with CONQUEROR SE. I'm running CONQUEROR SE on a QL with a Super Gold Card and a Hermes chip.

The problems have to do with I/O peripherals. The first problem has to do with printing, or more specifically, the lack of printing. My printer is an Epson compatible and I've configured CONQUEROR to print to Ser1. However, when the print command is given, I get nothing. This is the case with all the programs I try to print from. A couple of the programs are WORD STAR word processor and QUATRO spreadsheet. I've configured these programs to print to a serial printer linked to COM1, But, as stated previously, I get no response when the print command is given.

I've come to the conclusion that the problem may be caused by using an incorrect baud rate. If this is the cause, has anyone out there found a fix, such as inserting a line to an Autoexec.BAT file to set the baud? I've been using CONQUEROR SE for about a year now, and without the printing capability, the program's utility really is diminished.

The second problem I'm having has to do with using a mouse. I've loaded the mouse driver supplied with the mouse (MS-DOS) and can get some erratic behavior, but it's not close to being usable. The mouse is plugged into Ser2 and the program is configured to look for the mouse plugged into COM2. I only have a couple of MS-DOS programs that allow a mouse anyway, so its no big deal, but it would be nice to be able to use it.

For those using CONQUEROR, one of its shortcomings, besides its slow speed (even with a Super Gold Card), is its lousy graphics, especially with non-text programs. With the coming of Miracle System's MASTERPIECE chip, does anyone have any feel for its affect on the screen output in CONQUEROR? It only allows CGA graphics, but some graphic type programs are barely usable even when configured to CGA output. With MASTERPIECE's ability to give higher resolution, will it allow better graphics in MS-DOS - CGA graphic output? Also, with MS-DOS, the graphics can be changed from CGA to EGA, VGA, etc. Will CONQUEROR allow a DOS override of its CGA setting?

Since I've been using CONQUEROR for a while now, I've been thinking of writing an article about it. Living in a PC world, it's given me a link I haven't had before but, as this article has pointed out, it could be better. If I could get answers to my questions, it would make the article much more helpful for those that need a link to the PC world as I do.

QXL users can ignore all of this since they can directly access DOS disks, but for the rest of us, CONQUEROR can be an extremely useful tool.

(hey out there, would a real friend let a friend use MS-DOS? ...)

Me and my Mac - PART 2

Michael Jonas

DOUBLING MACHINE PERFORMANCE AND RESOURCES

In my first article, I discussed three technologies that can be applied to existing computer systems: Virtual Memory, Driver Level Compression, and Chip Doubling (aka "What's an Oscillator Chip"). Now, I'll talk about how I applied these to my Macintosh and discuss some of the performance gains I got. I'll also delve into how these modifications may be applied to the QL.

RAM DOUBLING

One important aspect in a computer system is the amount of RAM (Random Access Memory) present. The more RAM you have, the more applications you can run at the same time. Traditionally, RAM has been increased by buying more of it (in the form of actual physical chips in a variety of styles: SIMMS - Single Inline Memory Modules, IC's, etc...). Or, simply using part of your Hard Disk space as Virtual Memory - could also achieve your goal of increasing memory, albeit at a cost of tremendous speed loss.

A new product on the Macintosh market, RAM DOUBLER, lets you increase memory by a factor of 2, or more, without having to physically add new RAM chips. It does this in a most ingenious way. It employs both Virtual Memory and Driver Level Compression to achieve its goal. Here's how it works. It basically creates a RAM disk out of half the available RAM. Then, it applies Driver Level compression to that RAM disk to triple its size. Finally, it uses that tripled RAM disk in conjunction with Virtual Memory and viola, you have double the amount of RAM.

For those of you that need to see the math, take 4MB of RAM and divide it in half to get two 2MB partitions. Now, triple one of the 2MB partitions as discussed above getting 6MB. 2MB + 6MB = 8MB, which is twice what you started out with. And, although Virtual Memory techniques are applied, your hard disk is never used. Like magic, your system has twice the memory and only at a small performance loss, since Virtual Memory, done in memory, requires memory-to-memory swapping instead of memory-to-disk swapping of the traditional Virtual Memory management.

What a great idea! Now, can we achieve this on the QL? Sadly not on a normal, unexpanded machine. In order for RAM doubling to work, we need to be able to support Virtual Memory. This needs to be supported by the CPU and only the '68030' and up support it. So, the Super Gold Card and the QXL may have RAM doubling in their future; write to Stuart Honeyball with requests.

DISK DOUBLING

Next issue at hand is the hard disk space of your computer system. Whatever size disk you have, sooner or later you'll run out of space. One solution is to recover some of this space by deleting old files or compressing and archiving to floppy, or leaving on your hard drive any unwanted files. This works, but is a lot of hassle. So, in comes Driver Level Compression.

I've applied 'it' to my hard disk and 'it' expanded my disk to twice its space initially. The more files I loaded on, however, the less the expansion factor became. This is because the software re-estimates how much it can compress the free blocks of the disk by looking at its performance of the already compressed blocks.

On average, the compression factor dropped to about 1.5. In my case, it got down to about 1.3, or less, the fuller the disk became. I think that the software became more conservative the fewer free blocks of disk space it had to work with.

It got so bad, that I called their tech support to see why the doubling went to a 1.3 ratio and they mumbled something about using different disk driver software. Anyway, I found that the speed loss, which averaged from between 15-20%, was unacceptable considering the 1.3 times of disk space, so I have since un-installed it.

Friends have told me, however, that it works fine for them. The moral here is that, depending on the hard drive manufacturer and the hard disk driver software that comes with it, different results may be obtained.

On the QL front, I believe I've read somewhere on one of the Internet Newsgroups that someone was writing a piece of software called "double-space". * I've asked them what it is but, to date have not gotten a reply. From the sound of it though, it may be a new disk driver for QL floppies that could employ Driver Level compression. Certainly, Driver Level compression could be implemented on any QL, even the unexpanded one. Stay tuned on this. *(* partial recent update, it's called "SMASHER" ...)*

CHIP DOUBLING

Finally, we come to the CPU, or more importantly, the speed of the CPU, which in turn, yields the speed of the machine. Most people who've owned a computer for several years will find that, no matter how fast and spiffy their computer was when they bought it, two years later it will be TOO SLOW. This happened with my Macintosh IIsi, a fine 'lad' of a machine. It had a 20Mhz, 68030 processor, which was nice and fast back in 1992 but, now it's 1995 and the new Mac's use the Power PC 601 chip. Even the 68000 emulation on those Power Macintoshes now runs circles around a measly 68030 CPU.

So what is one to do? Throw out the outdated pile of heaping garbage and buy a new one? Yeah, that's the ticket. Well, I can't afford one right now but, even if I could, two years from now they'll be too slow as well. So, chip doubling to the rescue.

Most Macs are created 'above spec', meaning that, if you run them a little hotter, they (or more precisely their parts) will still work. So, simply put, a faster Oscillator Chip on the mother board, and voila, you have a faster machine!

On my Macintosh IIsi, I found a great deal for this. For a little over $30, I could boost the speed from 20Mhz to 25Mhz. All I had to do was solder the chip on the board myself (after of course de-soldering the old one). There are other products that don't require soldering, but they cost twice or three times as much, which is still a pretty good deal.

I have to admit, this upgrade was the best of the bunch. My Macintosh runs noticeably faster now. This has extended the life of my machine by at least another year. Not bad for a little more than $30. Can this be done on the QL? Well, I've been told not on the unexpanded QL, since all of its parts are not above spec. Heck, some are below spec. On a Gold card, Super Gold card, or QXL card, you'd have to ask Miracle Systems (give Stuart a call). *(Jeez, give poor Stuart a rest, but then again ...)*

IN CLOSING

Next time, I'll talk about the small Bulletin Board I've set up on my Macintosh, integrating both the Mac OS and DOS (using my SoftPC emulator) to enable me to access my machine over the phone lines.

I'll also describe this neat little feature that the MacIIsi has (which is only available now on the more expensive servers) enabling it to actually turn itself on at pre-determined times (no really, it's actually completel turned off when it does this, you can unplug it from the wall outlet and plug it back it and ...). *(mmmm, sounds more like a Frankintosh to me ...)*

FONTS - A Partial Review

Ed Kingsley

In the language of printing, a Font is an "assortment of type, all of one size and style"... Webster's 7th, New Collegiate Dictionary.

In the language of computers, a Font is a character set comprised of UPPER and lower case letters, numbers 0 to 9 and a set of symbols such as !, @, #, +, ?, etc., all rendered in a particular and similar style.

The QL has one resident (or default) Font, stored in the ROM, which is subdivided into two character sets. The 1st, from ASCII Decimal Code 31 to Code 127 contains the familiar letters, numbers and symbols we see on the keyboard. The 2nd, from ASCII Decimal Code 127 to Code 191 contains Greek letters, arrows and all the strange characters we sometimes get when we use the CTRL or CTRL+SHIFT keys in combination with another key.

A number of programs are available, SPEEDSCREEN, LIGHTNING, PRO PUBLISHER, for three, which offer additional Fonts for the QL. Some of them also allow you to design your own. Many EXECutable programs and commercial SuperBasic programs contain their own 'on-screen' Fonts. These Fonts are loaded into the QL's RAM at a specific memory address when the program is booted, and the QL's default Font is then bypassed.

Your on-screen Fonts may or may not correspond to the Fonts your printer puts onto paper. Most likely, they will not. Your printer too, has built-in Fonts which are, perhaps similar, but probably not the same as those that any particular program displays to the screen.

In order to print a character 'exactly' the way you see it on screen, it is necessary to use a graphic mode, either by doing a screen dump (prints the entire screen) or by running a program which looks at the Font character descriptions stored in memory and translates them to graphic instructions which will print to paper.

(or something like that - Al will explain further ...)

QL FONTS - Part Two, PRINTING

Al Boehm

Many programs are available to design new Fonts for the QL. They look swell on the screen, but printing them on a printer is a different matter. This article attempts to explain how to take a single character from a Font that has been designed for display on the QL screen and print it out as a graphic character which can be intermixed with standard printer text characters.

The listed programs are specifically for an Epson compatible printer. However, the equivalent printer escape sequences for graphic printing can be substituted for most printers. Note, however, that some printers do not have the capability to mix standard characters and graphics.

In the QL, a character is stored as 9 bytes which, when arranged horizontally, provides a bit map of the character. That is, each bit specifies whether a screen pixel is to be colored or not ('on' or 'off') and thus describes the shape of the character.

A set of characters is contained in a Font which is stored as 9 bytes for each character with two extra bytes at the beginning. The first extra byte gives the CODE number of the first character in the Font. If N is the number of characters in the Font, then the second extra byte is N-1, so that the first byte plus the second gives the highest valid code number in the Font. The default Font has 31 as its first character and contains 97 characters, so the second byte is 96 and the highest valid code is 127.

The QL uses two Fonts concurrently. If the character CODE number called is not in the range of the first Font, the QL looks in the second Font. If it's still not in range, the first character of the second Font is printed. This may have the appearance of a vertical rectangle. The default second Font starts at 127 and has 65 characters.

FIRST LOAD THE FONT

Toolkit II's procedure CHAR_USE activates a user designated Font so that it is used on the screen. Similar procedures are available in other SuperBasic aids. The main parameter of these procedures is the address of the new Font. This address is usually known since space needs to be reserved for the Font. Font loading can be done by the procedure GetFont which starts at line 200 in the listing. N char is the number of characters in the Font and ALCHP reserves (2 + Nchar * 9 bytes) which start at location font_at.

BITS FOR THE PRINTER

The main problem with sending Fonts to a printer is, that for video raster scanning, they are set up so the bits in a byte represent a horizontal slice through a character. Many (but not all) printers use a vertical set of pins and they expect the bits in a byte to represent a vertical slice.

To rearrange a character from the horizontal to vertical storage you need to do three things:

1. Be able to get a bit out of a horizontal byte.

2. Know where this bit is to be put in a vertical byte.

3. Put a bit in the vertical byte.

If h(i) is one of the 8 horizontal bytes numbered i=0 to 7 (we'll ignore the 9th Font byte which is usually blank for a space between lines) and v(j) a vertical byte, then the following statement puts bit k of h(i)into bit m of v(j):

```
If h(i)&&2^k then v(j)=v(j)¦¦2^m
where && and ¦¦ are the logical bit operators AND and OR.
1&&1=1 1&&0=0 0&&1=0 0&&0=0
1¦¦1=1 1¦¦0=1 0¦¦1=1 0¦¦0=0
```

2^k is a number with all zero bits except at k when you number the 8 bits in a byte: 0 (least significant) to 7. As you might expect for raster scanning, the horizontal Font bytes are numbered from top to bottom, but most printers require the least significant bit to be at the bottom. Therefore, m=7-i. Furthermore, the raster scanner uses the most significant as the left bit, but the printer expects the first byte to be on the left so that k=7-j.

Confused? I would like to be able to say this was all logically obvious to me, but in fact I figured it out by trial and error. In any case, the PROCedure invert_font, (Listing line 300) changes a QL Font to a printer Font.

PRINTER ESCAPE CODES

Bit image graphics are used to send a printer Font character to the printer. The (ESC)ape code is printer dependent but several (QL, Star NX-1000, Centronics GLP, ALPS P2000G, etc.) use - ESC K n1 n2 - to print n1 + 256 * n2 bytes at 60 bytes per inch. When each character is 6 bytes, this works out to 10 characters per inch, which is standard Pica size type. The default Font only uses 6 horizontal bits and the first is always blank for separation between characters so this gives a nice draft quality print. (See PROCedure draft, at line 400 of the Listing)

Many printers also use - ESC L n1 n2 - to print n1 + 256 * n2 bytes at 120 bytes per inch. If each Font byte is sent twice to the printer, a nice emphasized print results. (See PROCedure emphasized, at line 500)

The program, SPEEDSCREEN, also allows Fat Fonts which are a full 8 horizontal bits. For Fat Fonts, the 'FOR i Loop' in PROCedure invert_font, must go from 0 to 7 as written, but for standard Fonts, as in the PROCedure 'draft' and 'emphasised', 1 to 6 is sufficient.

ENTIRE FONTS AT ONCE

PROCedure invert_font, can be used on a character by character basis if only a few characters from a special Font need to be printed. However, it is a little slow. Better to invert all the characters at the start, change them to character mode, and store them in a printer Font array as shown in PROCedure init_printer, at line 600.

The 11 in the DIMension of font$ at line 620, allows for 12 characters (0 counts as one) to be stored per each value of the first subscript - just right for emphasized printing. The character function c$ can then be used to return the printer sequence to graphically print a character. For example, if (channel) #3 is the printer:

```
PRINT#3,'ABC'&C$(96)&'DEF'
```

will print the special Font character 96, which is ordinarily the British 'Pound' sign, between the 'C' and the 'D'.

PRACTICAL USAGE

This capability is particularly useful in two cases. First, If you have something other than a QL printer and want to use one of the QL characters that isn't in your printer's Font, for example, the pound sign.

The second case is when 'special characters' are used in QUILL. In order to print these characters, first send the document to a _lis file by, specifying a storage device, e.g. mdv1_, instead of "to the printer", when you 'print' your document.

Next, write a simple program that reads in the _lis file (say #6 is opened to a file), and then sends it to the printer (say #3) as is, except for the special characters.

```
100 OPEN#3, Ser1: REMark - a channel to the printer
110 OPEN_IN#6,FLP1_FromQUILL_lis: REMark - Read-in the _lis file
120  REPeat letter
130    a$=INKEY$(#6,-1)
140     IF CODE(a$)=96 THEN a$=c$(96)
150    PRINT#3, a$
160  END REPeat letter
170 CLOSE #6
```

NOTE: Changing Line 140 to: **140 a$=c$** will print out all of your text in the new Font, not just the pound sign.

The following Font_Printer SuperBasic Listing consists of three parts.

The First Part - Lines 100 to 155, illustrates how a QL Font can be sent to a printer. It is not intended as a utility although you are invited to key it in and vary it.

The Second Part - Lines 300 to 535, consists of three PROCedures:

1) invert_font
2) draft
3) emphasized

The Third Part - Lines 600 to 715, is a serious utility. PROCedure init_printer_font, and FuNction C$(chr), can be called from your program to print a character. Note, this last part also requires the PROCedure invert_font from the second section.

NOTE: The example Font used, BOLD6_fount, (@ Line 115) is just one of several Font files included with the program SPEEDSCREEN. You may substitute another Font file of your choice.

THE LISTING

```
100 REMark - Font_Printer 2 May 1995 by A.Boehm
101 REMark -------------------------------------
102 :
105 REMark - Loads a Font and prints it on an Epson compatible printer.
110 REMark - Toolkit II is required
112 :
115 font_at=GetFont("FLP1_Bold6_fount"): REMark - change name as req'd
120 Emphasize$='YES'
125 OPEN#3,ser1: REMark - print characters in font
127 STOP
130  FOR l=PEEK(font_at) TO PEEK(font_at+1)
135   invert_font font_at,l
140    IF Emphasize$='YES' THEN  emphasized v: ELSE draft v
145  END FOR l
150 PRINT#3: REMark - sends carriage return so line is printed
152 CLOSE#3
155 STOP
160 :
```

```
200 DEFine FuNction GetFont (FontFile$)
201 REMark ----------------------------
202 :
203 PRINT FontFile$
205 OPEN_IN#4,FontFile$
206 Nchar=(FLEN(#4)-2)/9
207 CLOSE#4
210 font_address=ALCHP(Nchar*9+2)
215 LBYTES FontFile$,font_address
220 RETurn font_address
225 END DEFine GetFont
230 :
300 DEFine PROCedure invert_font (font_at,chr)
301 REMark -----------------------------------
302 :
305 REMark - changes character with index number chr in font stored at
    font_at to Epson printer format stored in the 8 bytes of v.
310 DIM v(8)
315 first=PEEK(font_at)
320 last=first+PEEK(font_at+1)
325   IF chr<first OR chr>last THEN PRINT 'Character ';chr;' not in
      font range ';first;' to ';last
330    chr_at=font_at+2+9*(chr-first)
335     FOR i=0 TO 7
340      hi=PEEK(chr_at+i)
345      m2=2^(7-i)
350       FOR j=1 TO 7
355        IF hi&&2^(7-j) THEN v(j)=v(j)¦¦m2
360       END FOR j
365     END FOR i
370 END DEFine invert_font
375 :
400 DEFine PROCedure draft(v)
401 REMark ------------------
402 :
405 REMark - print as a graphic the character
             stored in first 6 bytes of v
410 p$=""
415  FOR i=1 TO 6: p$=p$&CHR$(v(i))
420 REMark - ESC K 6 0 tells printer to expect 6
             single-density graphic bytes
425 PRINT #3,CHR$(27);'K';CHR$(6);CHR$(0);p$;
430 END DEFine draft(v)
435 :
500 DEFine PROCedure emphasized(v)
501 REMark -----------------------
502 :
505 REMark - prints as a graphic the character
             stored in first 6 bytes of v
510 REMark - doubles each vertical slice to get 12 slices
515 p$=""
520  FOR i=1 TO 6:p$=p$&CHR$(v(i))&CHR$(v(i))
525 REMark - ESC L 12 0 tells printer to expect
             12 double density graphic bytes
530 PRINT #3,CHR$(27);'L';CHR$(12);CHR$(0);p$;
535 END DEFine emphasized(v)
540 :
```

```
600 DEFine PROCedure init_printer_font (font_at)
601 REMark ------------------------------------
605 REMark - Converts entire font stored at font_at
             to graphic format stored in font$
610 first=PEEK(font_at)
615 last=first+PEEK(font_at+1)
620 DIM font$(last,11)
625 REMark - 12 counting 0 for double density
625   FOR n=first TO last
630    invert_font font_at,n
635    g$=""
640      FOR m=1 TO 6:g$=g$&CHR$(v(m))&CHR$(v(m))
645      font$(n)=g$
650   END FOR n
655 END DEFine init_printer_font
660 :
700 DEFine FuNction c$(chr)
701 REMark ---------------
705 REMark - returns printer codes for graphic printing
             of character chr
710 RETurn CHR$(27)&'L'&CHR$(12)&CHR$(0)&font$(chr)
715 END DEFine c$
```

Two final points:

1) Most letters look OK on the printer when using this method, but it is possible to do much better if you have the time to develop special printer Fonts for a particular printer.

2) Also, some printers, such as the Olivetti 2300 Jet Ink Printer, use a single line raster method, and all of this inverting of Fonts is unnecessary.

(I expect that some of you may still have questions about Fonts. I would strongly suggest that you reread these three articles and try the listings presented. There is a great deal of information here and it might take you several passes to absorb it all. My sincerest thanks to Al for expanding his original article and covering this material so thoroughly. Remember, if it weren't for Fonts, you wouldn't be reading this ... ed)

A Letter From March R. Renick, Jr., St. Cloud, FL, dated 13 March 1995.

I guess you might say that your last editorial, titled "RAM_blings" finally broke through my complacency, and I decided the time had come to respond, in some fashion, to let you know how I feel about NESQLUG. *(uh-oh!)*

I was in the service during WWII. After my discharge, I enrolled and graduated from "Capitol Radio Engineering Institute". I became employed at the National Bureau of Standards, and from there to the Department of the Army, to Harry Diamond Laboratories. My entire government experience has been in the field of electronics. After forty years of work, I retired from the federal government and moved from the Washington, DC, area in 1988, to Florida, with my wife of 41 years, into our new home.

I became interested in computers in 1981. A group of us at work began attending meetings of the Capitol Area Timex/Sinclair Users Group, known as "CATS". I have subscribed to several publications that fell by the wayside (eg, "QL WORLD"), however, I still subscribe to "CATS", "UPDATE", "QUANTA", "IQLR", "SQLUG" and "NESQLUG". *(I bet the local paper drive LOVES you ...)*

I believe that if one reads enough articles on a subject, some of it is bound to rub off or sink in. At soon to be 70 years of age, I find that by keeping my mind active, I still have a lot to learn about computers. I consider NESQLUG to be a most worthwhile publication, which helps to extend the life of the QL.

I do wish to respond to your last editorial, before it's too late. Being a recent subscriber, I felt that I couldn't really add much to the publication. My preference has been let Al, Ed, Gary, Bill, etc., do it. I hesitate, even now, thinking that what I have to say has already been said by others. More importantly, I look at and read the many articles written by you and others and it gives me a feeling that I shouldn't even start. In your editorial, I refer to your sixth paragraph having to do with profound homilies. (*"We judge others by their actions, but ourselves by our intentions ...")* May I offer one more? Quote, "The road to hell is paved with good intentions". The fear of going there prompted me to write this letter.

I essentially do a 'singles act' here in Florida, since I have found no one close that's interested in the Sinclair QL computer. I have (2) complete systems operational. The first consists of the following: a QL with Super Gold Card, dual Miracle ED 3.5" drives, dual 5.25", 720K drives, QL Monitor and a Star NX 1001 printer. The second: a QL with Gold Card, dual 5.25" and dual 3.5" drives, QL Monitor, and a Star NP 10 printer. I also have a spare QL as a backup. All three QL's have JSU ROMs.

I am not a programmer, but I do enjoy using the QL's. My greatest use has been word processing, but spread sheets, as well as ARCHIVE'ing, is also of interest. I have learned to use numerous utilities, but I have yet to feel comfortable with graphics. *(smells like another series to me. Al? ...)*

I understand that NESQLUG has available several disks of programs which I would like to acquire. Please advise me as to how I would go about procuring them. Enclosed with this letter is an SASE for your reply.
(The 2 Library disks are available to NESQLUG members, for $2 ppd ... ed)

I certainly hope that NESQLUG continues on.

DIR_ections

Al Boehm

NESQLUG plans to be a 'presence' at the 'Oak Ridge QL Show', on the 10th of June. Let me know if you have a display, software program or anything else that we could use to advertise NESQLUG. If you get to the show, make sure you introduce yourself to me. There a lot of NESQLUG'rs I don't know by sight. I hope we can have some good talks there.

I bought each of my four children a QL, as gifts at Christmas or Birthdays. My youngest has now graduated from college. Were the QLs a good gift?

My oldest, Bill, went to art school. He used his QL to draw pictures using QL PAINT and MICE ART, (an early QL mouse system). He had one of his pictures published on the cover of "Time Designs Magazine". Maybe you have seen the talking skull that he drew and I animated. *(NESQLibrary Disk #1, Skull_bas, GREAT stuff! ...)* He learned a lot about computer art from the QL. Later, he went on to the Amiga, but it was the QL that got him started and taught him a lot. Money well spent, I figure.

My next oldest, Lois, used QUILL, a lot. I got her a daisy wheel printer for letter quality documents back in the days before personal ink jet/laser printers. Her QL computer experience made a nice entry in her resume when she applied for her current job with Pacific Bell. She still is addicted to some of the QL games such as BLOCKLANDS. I am really glad I got her a QL.

My son Ted joined the Army. He used his QL to keep track of troop numbers in his unit. He used EASEL to graph trends. One day, his Sergeant praised him for his good graphics but said, "Don't let the commander see it, or he'll want it every week." He received an award for a computer program, the development of which was aided by his QL experience. He now has a Gold Card and the 'QL Collection'. I have to say the QL was worth it in his case. *(he sent me an article, obviously money should not have been an object ...)*

My youngest, Elizabeth, had her QL with her at Penn State. Term papers and assignments were written. Good value was obtained from her QL.

Now, these are QL success stories. But, now they are history. What can be learned? Well, all my children had a computer available to help them grow up. There is no way I could have bought them each a different, more expensive system. What about your kids, or nephews or nieces? Why not?

GIF - A Review

Al Boehm

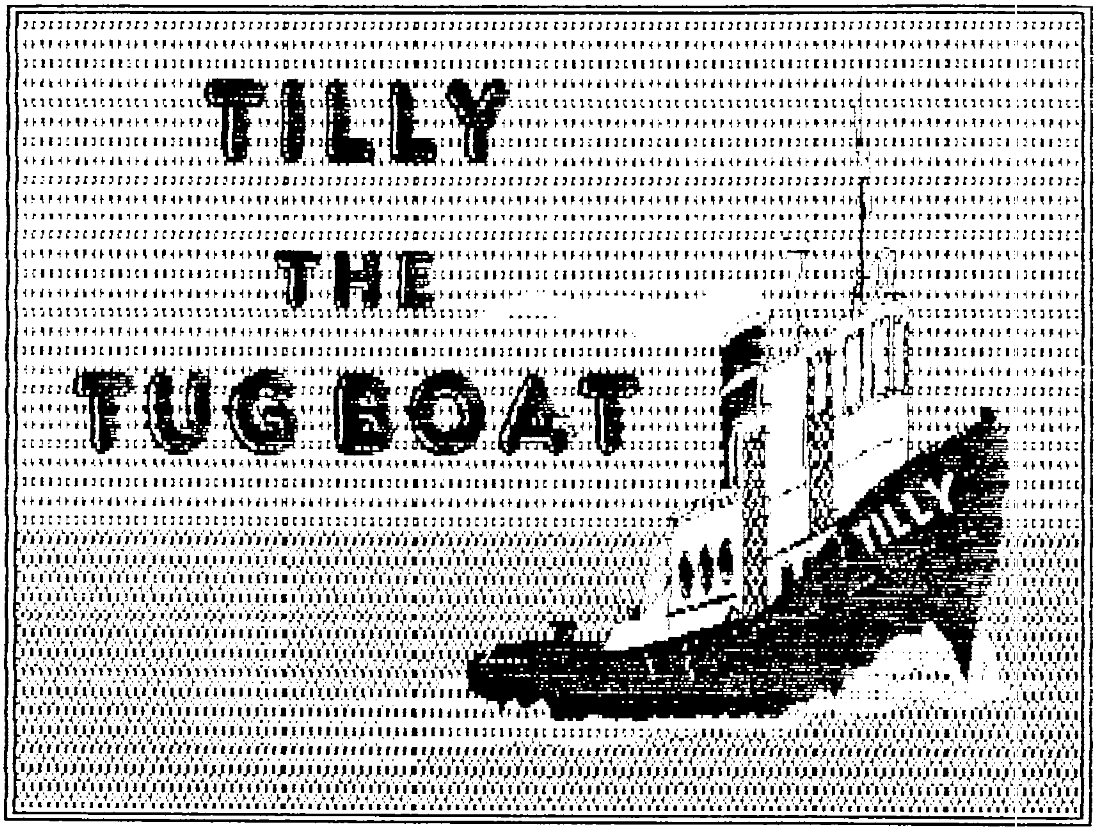
Carlo Delhez, from Holland, has written a useful graphics utility. It's a 'GIF reader' for the QL. 'GIF' is a computer graphics storage format standard. There are thousands of GIF pictures of every imaginable kind on the Internet and on disk. UnGIF converts these files into a QL screen picture.

First off, the fact that very large GIF pictures are condensed to fit on the QL screen is commendable. If you are using a QXL or other SMSQ devices with larger screens, it will adjust to the larger screen, but, even more commendable is the way colors are emulated using some very good dithering.

UnGIF is available from the IQLR Freeware Library for $3.50. It has a text file with good explanations and a program, enGIF, that converts QL graphics over to GIF format for other computers. You need toolkit II and the Pointer Environment for unGIF to work. You will also need DISCOVER or similar to convert enGIF images to IBM disk format. The QXL does this automatically.

A picture = 1000 words, so here are two GIF files translated by unGIF and dumped to the printer using TK II's screen dump facility. The first is 'Tilly The Tug Boat', an opening screen by my son, Bill, for an update of a game I am writing for my grandson, Matthew. 'Tilly' will be freeware.

The second picture is a GOES weather satellite picture of the clouds over North America. If you've been to a recent NESQLUG meeting, you may have seen Eric Norton playing TV Weatherman using this and similar pictures. Hmmm, this gives me an idea for another game for my grandchildren. These weather pictures can be obtained off the Internet.



GOING ONLINE 5 - QBOX-USA, Initial Access

Bill Cable

The North American QL community is very lucky to have a group of dedicated enthusiasts who have set up a very complete bulletin board dedicated to th QL. It is called QBOX-USA, and it has been in operation for nearly 2 years now. It has quickly expanded to now include the latest in computer hardware including a QUBIDE hard drive interface, a 212 MB, Western Digital, hard drive and a 14.4K US Robotics modem. This makes it an up to date bulletin board with enough memory to keep extensive old and new QL information available for online access. Your only cost for using QBOX is the long distance phone call to access it.

My hat goes off to these guys because it is a major achievement to set up such a complete bulletin board and, in doing so, they have provided one of the most important resources available to North American QL users. John J Impellizzeri and Don Walterman are the 2 key individuals in this undertaking. They pay the monthly phone bill and keep all the hardware and software operating on a 24 hour a day basis. They are known as Sysops (system operators) of the bulletin board. By freely sharing information, they have helped me and many others go online with our QLs. They will be at Oak Ridge this year (as they were at Newport last year) to demonstrate QBOX and give advice. Some other individuals who are important resources for QBOX are: Tony Firshman, Jan Bredenbeek, Bob Dyl, Lester Wareham, Chris Fowler, James Hunkins, Paul Holmgren, Frank Davis and Jim Pishlo.

As the years roll by, you have to wonder why the QL continues to have a solid following. I use the PC quite a bit and I like it, okay. I am sure that if I used a MAC I would like that okay, too. But to me, the QL is special because of the general effort most of us make to share our compute knowledge and experiences even though we are geographically spread out. We are small enough in number so we all have faces and personalities. No one is an expert in everything but we all have something to share. QBOX-USA is a good example of this. A lot of effort by a few individuals being shared with the rest of us.

QBOX-USA is definitely a high point in going online with the QL and will be thoroughly explored in this series. There are 3 different aspects of using QBOX-USA that will be examined:

1) Initial access and learning about QBOX - from QBOX
2) Sending/receiving Messages (mail) from/to QBOX Users
3) Downloading/uploading Files from/to QBOX

Each one of these topics will be covered in one article of this series. This, being the first one, will focus on initial access and getting to know QBOX by capturing information within QBOX about QBOX.

PREPARATION FOR FIRST ACCESS OF QBOX-USA

The first time you access QBOX, you are going to have to give QBOX your name and define a password you will use whenever you log on. The password is essentially a way to prevent others from logging on using your name. This stops anyone from impersonating you, and keeps private messages or files sent to you from being accessed by anyone else. Before you log on, think about what you want to use as a password. Don't be so clever that yc won't be able to remember it a month from now. Choose something simple, bu not readily associated with you by others.

By now, you are probably an old hand at using your communication program. I will give instructions assuming you are using Q_LINK, but alter them accordingly if you are using some other software. Although most communication programs including Q_LINK have facilities for storing phone numbers for automatic dial up, I will ignore those features in this example.

QBOX displays a screen full of information and then inquires if you want more with a More? (Y/n) prompt. After reading the screen, if you want to, just press <ENTER> to go on. Also, you can always pause QBOX by pressing 'P', and you can stop it (so you can quit or return to another menu) by pressing 'S'. The sign off command is called [G]oodbye and it is reached by pressing 'G' at a command prompt. Always try to exit using 'Goodbye'. This first time when we access QBOX we will just set up our password and then exit. We will then log on again and do a little exploring.

Logging on twice, makes us a 'user in good standing', as long as we access QBOX again within the next 3 months. Access is limited to 45 minutes a day, which is more than ample for most purposes, and prevents any one individual from hogging this limited resource on any particular day. On the second access we will collect a lot of information about QBOX and save it to a file for closer inspection at our leisure. If you have already logged on to QBOX before you can skip the first access since you already have a name and password known to QBOX.

FIRST ACCESS OF QBOX

1. Reset your QL.

2. Hook up your communication program. (Q_LINK or whatever)

3. Check your baud rate and change if needed.
   With Q_LINK : <F2>   (to set baud rate)
   With Q_LINK : <F3> B (new rate) (to change rate)

4. Turn on your modem.

5. Say hello to your modem.
   AT<ENTER>   (it should answer 'OK')

6. Dial up the QBOX-USA Bulletin Board.
   ATDP18102549878 <ENTER>   (or use your own method)

7. Press <ENTER> a few time once connection is made.
   <ENTER> <ENTER> <ENTER>   (... not too fast)

8. You will see the Flag Logo and QBOX identification.

9. You will be prompted for your first and last name. QBOX will look for your name in the user list and will not find it and ask you if you are a new user. Answer 'Y'. QBOX will greet you as a new user and ask you which town or city you are calling from. Enter your city and state or province and confirm it. You will then be asked for a password. Enter it and verify it by entering it again. You are now a QBOX user.

10. There will be a short questionnaire which asks you about your system and what kinds of software you use. Answer them so QBOX can compile useful statistics.

11. Some messages of general interest will be displayed and you will have to hit <ENTER> for More? (Y/n) a couple of times. The message area will be scanned to see if you have any new messages. You will finally reach the Main Menu.

12. Now, exit and then log on again below. This insures that your name won't be removed from the user list even if you don't use QBOX for the next 3 months (otherwise you will be removed after 30 days of no use).
    g<ENTER> [G]oodbye option
    y<ENTER> yes, log off

SECOND ACCESS OF QBOX

1. Reset your QL.

2. Boot up your communication program. (Q_LINK or whatever)
   (For Q_LINK users keep these commands handy:)

   <CTRL><F2> - Displays a list of all commands
   <F2> - Display status bar with current settings
   <F3> - Make first set of commands available
   <CTRL><F3> - Make second set of commands available
   <F4> - Make document functions available
   <ESC> - Get you back to your modem from commands
   <CTRL><SHIFT><F5> - Clears screen
   <F5> - Turns Capture Buffer on and off

3. If needed, set your capture buffer size to 300k.
   With Q_LINK : **<F4> M300 <ENTER> <ESC>**

4. Check your baud rate and change if needed.
   With Q_LINK : **<F2>** (to see baud nate)
   With Q_LINK : **<F3> B (new rate)** (to change rate)

5. Turn on your modem.

6. Say, 'hello', to your modem.
   AT<ENTER> (it should answer 'OK')

7. Turn on your Capture Buffer.
   With Q_LINK : **<F5>** (note it is 'ON' in status area)

8. Dial up the QBOX-USA Bulletin Board.
   ATDP18102549878 <ENTER> (or use your own method)

9. Press <ENTER> a few time once connection is made.
   <ENTER> <ENTER> <ENTER>

10. You will be prompted for your first and last name. QBOX will look for your name in the user list and will ask for your password. Enter it.

11. Some statistics about your last access will be shown and a bulletin with current information will be displayed. Read it, but you have your capture buffer on so you can study it in more detail later. You will save it, so hit <ENTER> for More? (Y/n) a couple of times.

12. The message area will be scanned to see whether you have any new messages since your last access or any new message of any kind has been left since your last access. Also the file area is scanned to see if any new files have been added since your last access. This is very handy, since once you catch up with all that has happened in the past, you only need be concerned with the new stuff and the messages right here tell you where that is.

Today, we will just be collecting all the information about using QBOX that is on QBOX. Since we are putting it all in the capture buffer, we can go through it quickly while we are online and read and/or print it out at our leisure. This will take around 15 minutes ($1.50). Next time, in "Online - Part 6", we will concentrate on reading messages and learn how to send and receive them. The time after that, in "Online - Part 7", we will concentrate on down loading and up loading Files.

13. You are now at the Main Menu. Like most bulletin boards, it is driven by a 'Hot Key' character associated with the command of interest. The Main Menu looks like:

```
Main:

[M]ail section,   [F]ile section,          [B]ulletins
[E]ditorial,      [I]nfo,   [S]tatistics,  [G]oodbye,
[C]hange user settings,     [U]sers list,  [A]nswer questionaire,
[Y]ell for sysop,           [V]ersion:
```

This time, we will ignore the [M]ail section and [F]ile section. We have already seen the [B]ulletin so we will quickly go through the [E]ditorial, [I]nfo and [U]ser list which will give us lots to read about QBOX.

14. Access the [E]ditorial from the Main Menu.
    e<ENTER>

You will be given a lot of information about QBOX, with updates added over time. Quickly go through this pressing <ENTER> at each More? (Y/n). You will return to the Main Menu.

15. Access [I]nformation from the Main Menu.
    i<ENTER>

You will now see the Information Menu which covers a wide subject area about QBOX and the QL. It looks as follows:

```
-----------------------------------------------------------
           Information available from QBOX-USA
-----------------------------------------------------------

 1 - How to use QBOX-USA (also download from File Area 8)
 2 - System Directory (Message and File areas)
 3 - Other Sinclair BBS systems
 4 - Info on SEMCO computer group
 5 - Magazines/Newsletters supporting the QL and QDOS
 6 - System Hardware and Software
 7 - QBOX-USA supporters
 8 - List of all Files available (also download Area 1)
 9 - Info on the 3rd Annual North American QL Show, June 1995
10 - List of other Message Echoes that QBOX-USA can receive
```

Now, we will work our way through all the above information areas. First choose '1' and work through it pressing <ENTER> to the More? (Y/n) prompt. You will eventually end up back at the Information Menu. Next choose '2', and so on until you work your way through all ten. After you leave QBOX, you will be able to examine all this material more carefully. After you work through all ten options, exit the Information Menu by pressing <ENTER>.

16. Access [U]ser list from the Main Menu.

```
u<ENTER>
```

You will then be prompted for the name or part of name to match. We want to see everybody so just press <ENTER>. The [U]ser list is very handy because we can see who is using QBOX and the last time they accessed the system. These are all people you can send messages to.

17. End the session from the Main Menu.

```
g<ENTER>                     "[G]oodbye option"
y<ENTER>                     "yes, I want to leave"
```

You now have lots to read about QBOX. Now save your captured information and possibly print it out and put it in a notebook especially dedicated to QBOX. In Q_LINK you would:

```
<F4>                         document edit function
s<ENTER>                     save option
flp1_QBOXinfo_txt<ENTER>     give it a name
```

You may also import your captured QBOX text File into a word processor or editor, then edit/and/or print it out. Read it carefully and you will be ready for "Online - Part 6", when we look at Mail (Messages) on QBOX.

MEETING NOTES — March 18, 1995

The regularly scheduled March meeting was held at the home of Dorothy and Al Boehm, in Bedford, MA. Both of our duly elected note takers seem to have been preoccupied on this day and conversations with all those swearing to have been there have elicited few details of what actually occurred. On the surface, that might imply that I was doing most of the talking, but, since even I don't listen to me, I don't remember much either. Fortunately, Eric Norton stayed around long enough to write the agenda on Al's blackboard and Al was able to read it to me, two months later. Al dropped over last night to test run the GIF images on the NESQLUG printer and try the programs in "FONT 3" on the QL, and with some clues from Gary and Mike, and a few glasses, plus or minus, of something I can't quite remember, we more or less pieced together the following:

Eric Norton demonstrated PROFESSIONAL PUBLISHER. Gary Norton demonstrated THE EDITOR, SE. He then showed the animated demo files from 3D CAD and SPRITE GENERATOR. Bill Cable demonstrated the latest version of his awesome ARCHIVE program DBEasy. (It's now awesomer AND easier, too) Al Boehm showed some of us his ENCORE music writing software for the IBM. It's for his wife, he hastens to add, but it WAS interesting none the less. Mike Jonas went surfing. He connected with the main frame at his office in Cambridge, and we browsed the 'FTP' Internet for awhile. I think we stopped in Berkley, California, but I don't remember getting off. *(rim shot!!!! ...)*

Al had just returned from Disney World, at a little past noon, and was jet lagged all through lunch. Bill Cable's wife, Mary, brought some really good lasagna, this is one thing we can ALL remember. Al was still groggy enough that the rest of us were able to get a fair amount of it for ourselves.

MEETING NOTES - 1 April 1995

At the suggestion of Mike Jonas, we held our April meeting 'under the auspices' of the Boston Computer Society's 9th Annual "Mega Meeting", at the University of Massachusetts, Harbor Campus. We met at noon at the entrance and repaired directly to the "Swap Meet", where a couple dozen people were selling off the undesired detritus of their personal cyber accumulations. Al picked up WORD FOR DOS at an attractive price and I found four boxes of 5 1/4 DSDD disks, which seem to be no longer available in stores everywhere. Actually, I found five, but I sold one box to Gary who had arrived a few scant moments too late to bag one live himself.

I attended a seminar on the "World Wide Web", gullibly thinking it was about the growing arachnid conspiracy, and was pleasantly disappointed to discover that it was actually about the growing Internet conspiracy. The highlight for me *(honestly ...)* was seeing some graphic 'downloads' from the recent medical project which imbedded a corpse *(stick with me ...)* in a kind of aspic *(I am NOT making this up ...)* and then cut it up into 3000+ sections with a laser, carefully photographing each layer. The total data base from this project is available, on the Internet, to anyone who's interested. The Bad News is that at 28K baud, it would take two weeks to download all of it. The Good News, I guess, is who would want to?

The consensus was that the "9th Annual BCS Mega Meeting" was not as good as it supposedly was last year. One vendor, whom I know personally, did not bother to return on Sunday, even though she had spent quite a bit to 'buy' a table there. Many, if not most of the computer community was represented, but there was no spark, no buzz or energy in the air. I did not see any new products or feel like anyone was there with any kind of statement to make. On the other hand, I got some disks, cheap, saw something even pathologists rarely get (want) to see ... and, I had a pass, so it was good for me.

NEXT MEETINGS

The next regularly scheduled meeting will be held at the home of Eric and Gary Norton in Billerica, MA. Topics will include more goodies from the DP QL Collection, using the personal modem, GIF file conversion and exactly what did happen at Al's in March. For lunch reservations or directions, call (508) 667-2048.

The (unscheduled) June meeting will be held in or near the home of Mel Laverne in Oak Ridge, Tennessee. Mel, I hope this is OK with you. We meant to call, but everyone forgot. The lasagna, I think it had to have been something in the lasagna. The Good News, Mel, is that Mary's coming and she's bringing some of her, of her ...?

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General meetings are held near the first Saturday of odd-numbered months, from 11 AM until 5PM.

Special meetings, are held near the first Sunday of even numbered months, from 1 PM until 5 PM.

Call ahead to confirm meeting dates if you plan to attend.

NESQLUG will exchange Newsletters with any group supporting the QL.

NESQLUG has a Software Library available to members free of charge.

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